

Appendix -1 Additional Costs of Musculoskeletal Disorders

Costs of Fraudulent Claims

A large section of U.S. forensic establishment, insurance industry and integrated system of workers' compensation program, sustained by dedicated lawyers, adjusters, controllers, insurance agents and doctors, is devoted to securing awards and benefits for patients invoking accident or work-related injuries linked primarily to musculoskeletal system. This multibillion dollar industry has routinely been criticized for fraudulent practices of the claimants, their treating physicians and the range of specialists and attorneys handling these claims.^{1,2} Even though the fraudulent claims are difficult to estimate, in US, in 2012 alone, 5.6 to 7.7 billion dollars' worth of claims were characterized as fraudulent; representing 13% to 17% of the total automotive accident injury related claims.³ Similarly, fraudulent worker's compensations claims have roughly been estimated to amount to tens of billions of dollars in the U.S. each year.⁴

1. Wertz, Keith, Bryant James. Managing Worker's Compensation: A Guide to Injury Reduction. (2000) CRC press. p. 207.

2. Spellman, Frank (2016). Occupational Safety and Health Simplified for the Industrial Workplace. London, U.K.: Bernan Press. p. 57. ISBN 978-1-59888-809-6.

3. Insurance Research Council, February 2015. <https://www.insurance-research.org/sites/default/files/downloads/IRC%20Fraud%20News%20Release.pdf>

4. Quiggle, James. "Worker's Compensation Fraud". Coalition Against Insurance Fraud. Retrieved 27 February 2013.

Costs of Narcotic Use and Abuse in Patients with MSKDs

Chronic pain resulting from inadequate and ineffective treatment of the MSKDs is routinely alleviated with opioid analgesics often prescribed in large quantities and on long-term basis.¹ In a 2001-2003 survey arthritis, rheumatism, chronic back pain, and severe headaches were the cause of chronic pain in 43% of the adult Americans.² The national health and nutrition examination survey conducted in 1999-2002 estimated that 14.6% of the adults in U.S. had widespread or localized pain lasting for more than 3 months.³ Prescription opioids have significant potential for abuse with long-term use and in 2013 estimated 1.9 million Americans abused or were dependent on prescription opioid analgesics.⁴ The costs of prescription opioids include direct costs of opioid prescriptions and indirect costs related to opioid misuse, abuse, overdose, costs of specific risk mitigation strategies and so forth. The yearly costs of prescription opioids have been estimated as \$53.4 billion for nonmedicinal use of prescription opioids, \$55.7 billion for abuse, dependence, and misuse of prescription opioids, and \$20.4 billion for costs related to opioid-related overdoses (2010 estimates).⁵ Inadequate prevention and the resulting prevalence of MSKDs, combined with their ineffective treatments, and routine alleviation of the pain with long-term use of prescription opioids is inexorably linked to the opioid dependence, abuse, and the current opioid epidemic in the United States.

1. J. Sciences, N. A., E., & Medicine, A. (2017, July 13). Pain Management and the Intersection of Pain and Opioid Use Disorder. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK458655/>

2. Tsang A, Von Korff M, Lee S, et al. Common chronic pain conditions in developed and developing countries: gender and age differences and comorbidity with depression-anxiety disorders. J Pain 2008;9:883-91. Corrected in: Demyttenaere K. J Pain 2009;10:553. <http://dx.doi.org/10.1016/j.jpain.2008.05.005>

3. Hardt J, Jacobsen C, Goldberg J, Nickel R, Buchwald D. Prevalence of chronic pain in a representative sample in the United States. Pain Med. 2008 Oct;9(7):803-12. doi: 10.1111/j.1526-4637.2008.00425.x. Epub 2008 Mar 11.

4. Substance Abuse and Mental Health Services Administration. Results from the 2013 National Survey on Drug Use and Health: summary of national findings. Rockville, MD: US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration; 2014.

5. Inocencio TJ, Carroll NV, Read EJ, Holdford DA. The economic burden of opioid-related poisoning in the United States. Pain Med 2013;14:1534-47. <http://dx.doi.org/10.1111/pme.12183> Nahin RL. Estimates of pain prevalence and severity in adults: United States, 2012. J Pain 2015;16:769-80. <http://dx.doi.org/10.1016/j.jpain.2015.05.002>